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The Preparation of a Graduate Eb Alto Saxophone Recital

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THE PREPARATION OF A GRADUATE

E♭ ALTO SAXOPHONE RECITAL

A Research Paper

Presented to

the Graduate Faculty

Central Washington State College

In Partial Fulfillment

of the Requirements for the Degree

Master of Music Education

by

Thomas G. Barber

July 1970

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An integral part of this thesis (covering paper) is a tape recording of a graduate recital performed July 14, 1970, as part of the requirement for the completion of the thesis.

APPROVED FOR THE GRADUATE FACULTY

A. Bert Christianson, COMMITTEE CHAIRMAN

G. Russell Ross

John J. Purcell

CENTRAL WASHINGTON STATE COLLEGE
DEPARTMENT OF MUSIC

presents in

Graduate Recital

TOM BARBER, ALTO SAXOPHONE

assisted by: Kay Roskam, Piano*

Gerald Crofford, Piano

PROGRAM

I

Concerto in Eb A. Glazounov and E. Petiot
in one movement

II

Complainte Andalouse, Opus 19 Cesar Espejo
Trans. Marcel Mule

III

Particles; for Eb Alto Saxophone and Piano Armand Russell
Allegro
Lento
Allegro moderate e barbara
Andante
Allegro

IV

Sonata, Opus 19, for Alto Saxophone and Piano Paul Creston
movements
1. with vigor
2. with tranquillity
3. with gaiety

HERTZ RECITAL HALL

July 14, 1970

8:15 P.M.

*Faculty Member

*In partial fulfillment of Requirements for
Degree in Master of Music Education*

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Chapter 1

INTRODUCTION

Many times during the past year the following question was discussed: Should a person who has been in the field teaching and has returned to school to complete a master's degree spend the time it takes to prepare a graduate recital? Some people contend that it takes too much time and ask the question, "What good does it do? You are not going to be a professional performer." For those who seek to perform professionally as concert soloists or as orchestra members, the advantages of the graduate recital are evident. For one who wishes to improve as a teacher there should also be many benefits to be gained from the preparation of a recital.

STATEMENT OF THE PROBLEM

For years there has been a controversy about whether a person must be a good performer to be a good teacher. It is the writer's hypothesis that the musicianship developed in becoming a better performer will help one to become a better teacher.

The purpose of this paper will be to discuss technical problems that were encountered in preparing four solo

pieces for a graduate saxophone recital. The four pieces were Concerto in Eb for Alto Saxophone, by A. Glazounov and A. Petiot; Complainte Andalouse, by Cesar Espejo, transcribed for alto saxophone by Marcel Mule; Particles for Alto Saxophone and Piano, by Armand Russell; and Sonata for Alto Saxophone and Piano, Opus 19, by Paul Creston.

This paper is a study of the preparation of the graduate recital. The writer has selected difficult passages from the Sonata and the Concerto and has described the ways in which he solved these problems. Exercises for developing good control of the high and low registers are also described, since these registers are used often in solo playing. The problem of when to use alternate fingerings comes up often in solo literature, and the writer has described these fingerings and has examined passages in which they were used.

Through the preparation of this recital, the academic study of the saxophone, and the writing of this paper, the writer hopes to focus more attention on an instrument that is extremely popular in the "pop" and jazz fields of music and is becoming increasingly important as an instrument for serious study.

PROCEDURE

The author intends to describe some of the actual methods and exercises he used in overcoming some of the

problems mentioned above. Through reading research, the writer has noted suggestions that others have offered for the advanced player to improve his saxophone technique.

LIMITATIONS OF THE STUDY

In this paper the author has described specific problems of fingering and tone production and ways of solving these problems. This is not meant to be an elementary book, and it is a paper meant to help one overcome certain problems in advanced playing. Although good equipment is important, the author has chosen not to delve into this aspect of performance, as he feels that anyone wishing to seriously study the saxophone will have good equipment.

DEFINITION OF TERMS

Altissimo Register

This register consists of any notes that are played that sound higher than the standard high F for saxophone. These are overtones, harmonics, and are produced by a slight change in embouchure and irregular fingerings.

Automatic Octave Key

This is one important change in the fingering system of the saxophone since its invention. This key allows the change in position of the octave tone hole to allow clearer overblowing of the octave. The octave key works on the side of the instrument in the range from D, fourth

line, to G above the staff. At A above the staff the octave key automatically changes to the top of the instrument to produce a clearer sound.

Cross-fingering

This is the use of standard fingerings instead of chromatic or alternate fingerings, between the notes B and C and between the notes F and F#. This causes one to use the index finger, then the middle finger, and then back to the index finger, a movement which is quite awkward.

Chapter 2

HISTORY OF THE SAXOPHONE

Antoine Joseph Sax was born in Dinant, Belgium, on November 6, 1814, and died in Paris on February 7, 1894. Sax, who later became known as Adolphe, was the first son of eleven children of an instrument maker and was brought up in an environment working and experimenting with musical instruments. As a young man he entered the Brussels Conservatory of Music, where he became an accomplished clarinetist, while at the same time seeking ways of improving the clarinet (4:430).

SAX INVENTED THE SAXOPHONE

Sax left no writings about why or how he invented the saxophone, but some say that in his efforts to improve the bass clarinet he accidentally invented the baritone saxophone. Others suggest that Sax was trying to invent a clarinet with an extended range that would overblow at the octave (6:50; 4:431). Houlik (13:58) says that Sax was a master instrument maker, and he knew exactly what he was looking for. He also knew that getting the clarinet to overblow an octave would shorten its range, not extend it. Others feel that Sax was just trying to improve the

opheclide, which can be described as looking somewhat like a euphonium with padded keys instead of valves. Bains (2:142) says there is no doubt that in his experiments Sax used a clarinet type mouthpiece to replace the brass mouthpiece of the opheclide. Grove's (4:431) says that Sax designed his instrument like the opheclide but used a single reed mouthpiece rather than a brass cup mouthpiece, and this was supposed to unite the clarinet section and the tenor brass section.

Many believe that Sax set out to invent a bond between the woodwind family and the brass family especially for use in military bands (15:6). Burnau (5:52) claims that Sax recommended his saxophones for bands to give them sonority between the reeds and brass. Kastner, a contemporary of Sax who was the first to use the saxophone in the symphony orchestra, stated Sax's reasons for inventing the saxophone in a footnote to his Methode Complete et Raisons de Saxophone, Dediee a Monsieur Ad. Sax par Georges Kastner:

Monsieur Sax conceived first the idea of the saxophone; in our military bands the woodwinds are in fact without force to battle the brasses; in our symphony orchestras the strings are unable to make themselves heard in competition with the winds. He therefore had to think of a harmonious intermediary with characteristics of both the former and the latter, neither overpowering, nor overpowered. The saxophone, we must admit, gives us the solution to this difficult problem, and it is called upon to render inestimable service in our bands and orchestras (22:49).

Anderson feels that Sax had a well thought out and

mature idea in mind about how to unite the "flexibility of the strings, the power of the brass and the colorfulness of the woodwinds into one instrument" (1:26). Although most instruments evolved, Patrick (17:70) claimed that Sax had a concept of the tone quality that he wanted and set out to invent it. Millstein (14:48) said that Sax was looking for an instrument to imitate the human voice and Rascher claimed that Sax's goal was to add a "new color to the noble heritage of musical instruments" (13:58).

Sax Moves to France

Sax completed his first saxophone, a baritone model, in 1841 and entered it in the Belgium National Exhibition, which refused to grant him a prize for his "clarinet development" (5:52). In 1842 he moved to Paris, where he met and played his horn for Hector Berlioz, who described the horn in the Paris Journal des Debats as a horn that would "naturally never be suitable for rapid passages or sophisticated arpeggios" (17:71). This remark supposedly caused Sax to build an alto and tenor saxophone to go along with the baritone model (17:71). Berlioz and Kastner, the composer, befriended Sax, and they were of considerable influence in helping him become established in Paris.

The Early Saxophone

The early saxophone was built from sheet brass and was hard soldered along the seams and then bent and

hammered into shape. The tone holes were then pierced into the brass, and the collars for the tone holes were soldered into place, causing the metal to become weak (4:432).

The original mouthpiece had a round inner chamber and was shorter and "fatter" than the mouthpiece of today. This mouthpiece, plus the smaller bored horn, gave the older saxophone a sort of mellow muted sound, but it was capable of doing everything that the saxophone of today can do (2:142). Key work was fairly advanced by the time of the invention of the saxophone; therefore Sax did not have much trouble in this area of development. But his first models left something to be desired, and Sax and others worked at improving the fingering. They tried to adopt many of the Kloss-Boehm fingerings for doubling little fingers, but these did not work. Except for the changes in the mouthpiece, the enlarging of the bore, and the addition of the automatic octave key, the saxophone today is much like the first one invented (4:431).

Patent for the Saxophone

Sax made many enemies in Paris when he first started producing his horn, because, as a master instrument maker himself, he wanted all the parts made under his supervision. This caused difficulty at that time, because, due to guilds, parts for instruments were made at several different places and then assembled at another. Instrument manufacturers formed a group and tried to keep workers out

of his factory, and they even tried to keep musicians from playing his horns (12:31). The instrument makers accused Sax of stealing his idea from a German named Heckel, and they tried to keep him from getting a patent. However, they could not prove this to be true, and in 1846 Sax got his patent for the Saxophone (5:53).

Sax's French patent in 1846 encompassed fourteen instruments, all of which had a written range from low B to F'''. In 1887 a Bb key was added, and today some saxophones have a low A (4:432). There were two sets of saxophones, one for the orchestra and one for the band, and both sets included the sopranino, soprano, alto, tenor, baritone, bass, and contra-bass saxophones. The band instruments started with the Eb sopranino and alternated with the Bb horns to the low Eb contra-bass, and the orchestra instruments started with the F sopranino and alternated with the C horns to the F contra-bass. The sounding range of all of these instruments was six and one-half octaves. Today the sounding range is four and one-half octaves without the sopranino and contra-bass and not including the altissimo register. The sopranino and the contra-bass are almost nonexistent today, and the bass is very seldom used because it is so cumbersome. The orchestral instruments did not last long, except for the soprano in C, which could read oboe parts in military bands, and the tenor in C, which could read off piano music without

transposing. It was often used in the early dance band era (2:143).

Military Accepts the Saxophone

Sax, a virtuoso player, demonstrated his instrument as often as he could, and, with the help of Berlioz, Kastner, Meyerbeer, and Napoleon III, his saxophones were adopted into the French military bands as replacements for the oboes, bassoons, and horns within a year after they were patented (4:431). In 1848 the saxophone was thrown out of the military bands because of its imperfections, and just one year later Sax received the Gold Medal for his saxophone at the Paris Industrial Exposition (25:18).

Sax at the Paris Conservatory

Sax was appointed Professor of Saxophone at the Paris Conservatory of Music in 1857 and served there until 1870, at which time the class was dropped; it was not re-established until 1942 (23:27). Sax was in lawsuits practically his whole life, became bankrupt early, regained his money and status, and then went broke again seven years before he died (12:33).

THE EARLY SAXOPHONE IN AMERICA

The credit for establishing the saxophone as a member of the American military bands goes to a violinist named Dodworth, who was a founder of the New York

Philharmonic (14:48). After it was established in American bands it was Patrick Gilmore who did more to publicize it than anyone else (14:48). The early American bands used only an alto and a tenor saxophone. Concert bands today have at least a quartet of saxophones, and sometimes more (9:148).

THE SAXOPHONE IN THE ORCHESTRA

The first person of record to try and discredit the saxophone publicly was Richard Wagner. He blamed the failure of his opera Tannhauser, performed in Paris in 1861, on Sax and his saxophones. He claimed that Sax had forced him to replace his French horns with saxophones, and this caused the failure of the opera (14:47).

As mentioned earlier, Kastner was the first composer to write specifically for the saxophone in the symphony orchestra. He used the saxophone as a member of the orchestra on December 1, 1844, in the opera The Last King of Judah. An American composer, William Henry Fry, was the first to use the saxophone as a solo instrument within the orchestra when he used a soprano saxophone solo in his Santa Claus Symphony in 1853 (17:70).

French Use of the Saxophone in the Symphonic Orchestra

The French have used the saxophone often over the 130 years since its invention. Bizet used it in 1872 in his L'Arlesienne Suite No. 1, and Charpentier used it in

The Life of a Poet in 1892 and in his orchestral suite Impressions of Italy in 1913. D'Indy used the saxophone in the Legend of St. Christopher in 1920, Ravel used the soprano saxophone in 1928 in his Bolero, and Milhaud used the alto in 1923 in his Creation of the World and the Carnival of the Lands. In 1938 Honegger used three alto saxophones in his oratorio St. Joan (16:43).

American Use of the Saxophone in the Symphonic Orchestra

Copland used the saxophone in his Concerto for Piano and Orchestra, and Gershwin used it in his American in Paris. Percy Grainger, himself a saxophonist, used the saxophone in Green Brushes, and Virgil Thompson used saxophones in his orchestral suite The Plow that Broke the Plains. The saxophone was used in two symphonies by Charles Ives and in one symphony by Roy Harris (16:43).

Other Composers' Use of the Saxophone

Richard Strauss was the first composer to use the saxophones as a section in the orchestra in his Domestic Symphony. Hindemith used the saxophone in his opera Cardillac in 1926 and the overture to the opera News of the Day in 1929, while Valdeman Vogel wrote a secular cantata for three solo voices, chorus, and saxophones. Shostakovich used the saxophone in his ballet The Age of Gold, and Prokofiev used it in Lieutenant Kije, Romeo and Juliet, and Symphonic Dances. Vaughan-Williams used the saxophone

in his Symphony No. 6, and Butler used it in his orchestral work Sinfonia da Requiem. Other composers who have made use of the saxophone are Bartok, Kodaly, Berg, and Villa-Lobos.

THE SAXOPHONE AS A SOLO INSTRUMENT

After the saxophone class at the Paris Conservatory was eliminated in 1870, there was very little serious solo work done on saxophone for many years. In the early twentieth century, Debussy was commissioned by a Mrs. Hall, a saxophonist from Boston, to compose a work for saxophone. Debussy did not care for the saxophone and put off composing the piece as long as he could. Finally when Mrs. Hall came to visit him in Paris, he finished writing the Rhapsodie for saxophone (18:30).

Sigurd Rascher

Sigurd Rascher has probably done more for the improvement of solo literature for saxophone than any other person. He demonstrated his ability on the instrument, on which he is self-taught, to every composer he could, and practically a whole repertoire has been written for him. Rascher has appeared as soloist with over one hundred of the world's greatest symphony orchestras, including the Berlin Philharmonic, which has featured a saxophone soloist only twice in its history, and both times it was Rascher (20:15). The New York Philharmonic played 3,534 concerts

before featuring the saxophone as a solo instrument, and Rascher was the guest soloist (14:50).

Solo Music for Saxophone

Probably the two most famous pieces of solo music for saxophone are the Concertino da Camera, by Jacques Ibert, and the Concerto for saxophone, by A. Glazounov. Both of these numbers were composed for Mr. Rascher. Paul Creston has written a Suite, a Sonata, and a Concerto for saxophone, and he says that he chose to feature the saxophone because "he likes its melodic qualities, its dramatic capabilities, and the fact that it can maintain its own power" (31:164). Hindemith, who wrote a Sonata for saxophone, says that the saxophone "shows a balance of unhindered technique, expressive range, and directness of speech that has its equal only in the modern flute" (30:164). Other composers who have written for the saxophone are Bozza, Herman, Larson, Holebrooke, Milhaud, and Heiden, and this list is by no means complete. Marcel Mule, now professor of saxophone at the Paris Conservatory, and Rascher have transcribed many fine solos for saxophone.

Although the saxophone is relatively young in comparison to most other wind instruments, it has progressed in solo work in its short history at about the same rate that the clarinet did. Mozart's Clarinet Concerto was written almost a century after the modern clarinet was

first being used, and the Concertino by Ibert was written almost a century after Sax invented the saxophone (25:18).

THE SAXOPHONE IN POPULAR MUSIC

Popular artists in the early 1920's helped to popularize the saxophone; then dance bands quickly picked it up. The saxophone probably became popular in dance music because it was mechanically simple to play, and it could balance the brass section with its power. Because the saxophone was easy to "pick up and blow," the tone that has been associated with it through the years has varied considerably; mainly for this reason, the saxophone received a bad name in serious music. The tenor saxophone was predominant in the early dance bands and in blues music, but with the advent of "be-bop" and "cool" jazz the alto and baritone saxophones began playing a prominent role in jazz. The jazz artists have been using the saxophones because of their extreme flexibility and agility.

The many uses of the saxophone through the years did show the extreme flexibility of the instrument, and the use of the saxophone in "pop" music did help to bring it to the attention of some serious composers. Now that more serious composers have written and are writing for saxophone, and now that it has become an instrument for serious study, perhaps more people will echo the feeling expressed by Hector Berlioz over 100 years ago: "Composers will be

indebted to Mr. Sax for the invention of this fine instrument (5:51).

Chapter 3

IMPROVING SAXOPHONE TECHNIQUE

The basic problems of improving saxophone technique lie in developing good tone, good finger technique, good intonation, and good articulation; one cannot be developed at the expense of another. It is the author's firm belief that it does not matter how well one plays technically, if the tone is not good it detracts from the performance. Intonation will improve only if the performer controls the tone and only when the performer becomes aware of intonation problems. The articulation and rapid tonguing problem must be worked at to coordinate the tongue with the fingers.

DEVELOPING GOOD TONE

The saxophone has a great flexibility of tone that "can range from the mellowness of a cello or French horn to the lyrical sounds of a flute" (26:415). Rascher (20:15) says that the saxophone tone should be a "tone with great modulation and flexibility, capable of a wide dynamic range, mellow and yet well defined and distinct."

One could discuss tone on a page or a whole chapter, but the discussion could only concern how to develop a good tone, because one cannot describe exactly what good tone should sound like. Good tone must be heard. Before

a person starts playing solo literature he should listen to as much serious saxophone playing as possible in order to learn how a good tone should sound. If one cannot hear a "live" performance, there are many records available by Rascher, Mule, Abato, and others, which demonstrate good saxophone tone.

Embouchure and Throat Control

Many books on saxophone say that the embouchure should be loose, and the author feels this is misleading. The embouchure should be flexible and able to adjust a slight bit at any time, but the same basic firm embouchure is used to play the full range of the horn. One should not "drop the jaw" on the low notes or pinch or "firm up" on the high notes. The throat should be as relaxed and open as possible, and the player should try to think of the vowel sound "o" or "ah" in his throat; he should try to keep away from the "e" sound, as this causes tension in the throat.

Developing Tone in the Low Register

The middle range of the saxophone from G, second line, to G, first space above the staff, is the best range to begin the development of good tone, because this is where the saxophone plays the easiest. When one has developed a fairly good tone in the middle register he should begin working on the low register tone. The author found

that while working to gain control of the low register the higher tones also improved, probably because the low register requires strong breath support and a firm embouchure.

One way of developing good tone in the low register is by using the exercise shown in Example 1. In this example the player should start each scale softly and crescendo

Example 1.



to the last note. These scales should be played in one breath, if possible, slowly and slurred, and the last note should be held as long as possible. The same exercise should then be repeated, starting forte with a decrescendo to piano. The complete exercise is shown in Appendix A.

When one gains good control of the above exercise he should then play the same scales from the lower notes to the upper notes, again starting forte with a decrescendo to piano, and then reverse the process. These exercises must be played slowly so that the student can think about producing a good tone and about keeping the embouchure the same at all times.

After these two basic exercises have been studied thoroughly and the student gains good control of the low register, he should practice playing interval skips down

to the low notes and whole notes at different dynamic levels in the low register. These all seem to be very simple exercises, but the author feels that they are important if one is to develop control of the low register.

Developing Tone in the High Register

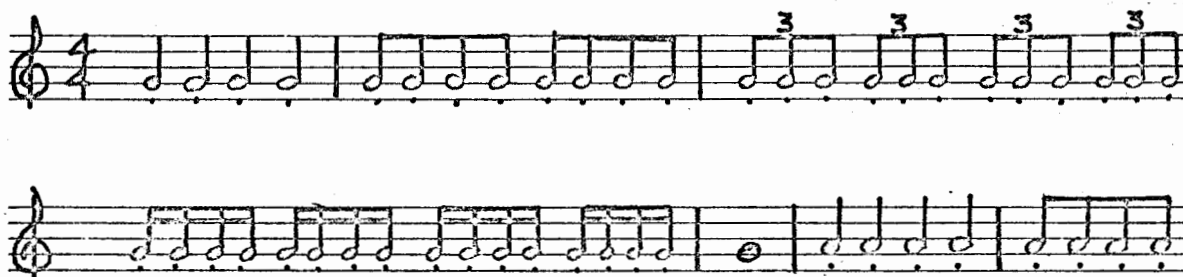
It is difficult to gain control of the tone in the upper register because these notes are on the shortest part of the instrument and therefore have the least amount of resonance. Also, the slightest variation in air column or embouchure will change the pitch or tone of the note. The author has used the same scale study approach to developing the high register as he did in the low register, except that the scale is started on G second line and goes to G above the staff and up a half-step each scale until high F is reached. These scales should be practiced in the same way as the lower ones, slowly and slurred, from piano to forte and then reversed. Again, long tones should be practiced at different dynamic levels, and work with intervals should also be done.

One must be constantly aware of keeping the embouchure correct and should not pinch or bite in the high register or allow it to become loose in the low register. Only when this is mastered and the tone controlled can large interval skips be made from high notes to low notes without any problems.

TONGUING

Tonguing on the saxophone, like tone production, is easiest in the middle register of the horn. To develop rapid tonguing the author used two different exercises. The first one (Example 2) is used just to get the tongue moving at a rapid speed. It is best to start slowly, using a metronome, and make sure the tongue is doing everything correctly. With improvement the speed should be increased. When practicing this exercise the tongue tires easily, so the exercise must be left for periods of time and then returned to later in the practice session. This exercise

Example 2.



should also be practiced on scales that reach into the upper and lower registers. In these registers one will find that the tongue must be lighter and quicker than in the middle register and more air must be used.

Once a person has the tongue so that it works at a good speed, it must be coordinated with the fingers. The following exercise (Example 3) was used for working

for coordination between the tongue and fingers. When using this exercise it is recommended to use a metronome

Example 3.



and work both up and down the scales. One must start slowly, making sure the tongue and the fingers work exactly together and, as facility improves, constantly increase his speed.

DEVELOPING FINGER TECHNIQUE

Finger technique can be improved only through hard practice, and the best method is scale practice. If a person knows all his major and minor scales and arpeggios and plays them also in thirds, he is on his way to developing good finger technique. The solo literature that one can study after becoming seriously interested in the saxophone will offer a person plenty of practice on fingerings. There are also many advanced study books published for saxophone. A list of advanced study books appears in Appendix B.

It cannot be over-emphasized that in solo literature composers take advantage of the full range of the saxophone; therefore, a good player must have as much

control of the awkward low fingerings and the high palm key fingerings as he does of the middle range. This can be accomplished through hard work with intervals and chromatics, making use of the roller keys in the low register and the palm keys in the upper register. The author recommends pages 67-91 of DeVille's Universal Method for Saxophone for exercises to develop finger technique in the high and low registers.

DEVELOPING GOOD INTONATION

The problem of intonation is probably the most widely known of saxophone problems, and there is no easy way or trick for improving it. One way of helping intonation is to check every note on the saxophone with a strobe tuner to see whether it plays sharp or flat. When this is done the player must memorize every out-of-tune note, and then he must learn ways to adjust each note so that it will be in tune. These adjustments can be made with the throat and tongue, the embouchure, or a mechanical fingering. A person can also improve his intonation by playing duets so that he has to listen to be in tune with another instrument.

DEVELOPING VIBRATO

Millstein (14:48) calls the vibrato the curse of the saxophone. If vibrato is done with good taste most listeners will not be aware of it. When the listener is

aware of the vibrato, its purpose of enhancing the tone has been defeated (28:11). Vibrato should be developed only after a good, solid, clear tone has been established, as the player must be able to control the vibrato at all times.

The most commonly used vibrato is that of the up and down motion of the jaw. When one is beginning to learn vibrato it is good to practice with a metronome, making the tone vibrate with a "jah-jah" or "wa-wa" sound at the same rate as sixteenth notes at a metronome marking of 60. When the vibrato is controlled, with emphasis on the controlled, so that it is even, the tempo should be increased. At first the jaw movement may have to be exaggerated, but it should be refined as quickly as possible.

The saxophone tone does not vibrate evenly on both sides of the pitch, but mainly under the pitch and back to it; therefore, the vibrato must not become too wide or the intonation will suffer. A rule of thumb about vibrato is that usually the higher the pitch the faster the vibrato, and the lower the pitch the slower the vibrato. Vibrato is something that can give the saxophone a very pleasing tone or a very poor one.

THE ALTISSIMO REGISTER

The altissimo register has been an area of controversy through the years. This register consists of any

note that is above the standard high F written for saxophone. These notes are harmonics, or overtones, that are produced by overblowing the lower octaves and using forked fingerings and some change of embouchure. Some teachers and saxophonists feel these notes should not be considered a part of regular saxophone study and do not teach them or use them (17:77). If one refers to the time when Adolphe Sax first began demonstrating the saxophone, Kastner claimed that he played from low B to high C''', which would be three octaves and a semi-tone, but Sax himself warned that the three-octave range should be expected only from expert players (21:50).

Since the time of Adolphe Sax, Rascher has made the greatest use of the altissimo register, and much of the solo music that has been written makes use of these harmonics. Patrick (17:76) says that anyone who feels that it is acceptable to play the altissimo notes an octave lower is unaware that "the intensity achieved by playing a wind instrument in its extreme ranges is one of the important expressive devices available to the composer."

The author feels it is important to play these notes where they are written to do justice to the music and the composer. These tones are not learned overnight or within a week; they take many hours of hard practice, and Rascher says that mastering this range takes years of study and practice (22:5). He also says that before beginning the

study of the altissimo register the saxophonist "should be able to command and control completely the attack, quality, and vibrato of every note within the normal range" (22:5). Probably the best book published about the altissimo register is Sigurd Rascher's Top Tones for Saxophone.

Chapter 4

PROBLEMS IN PREPARING THE RECITAL

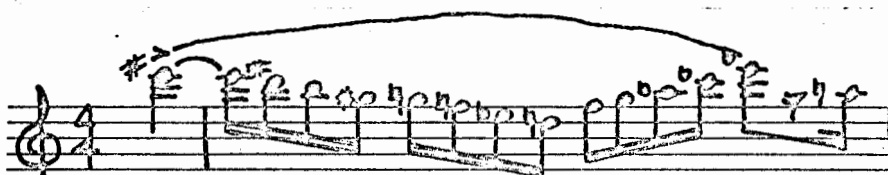
The problem of manipulating keys in the correct tempo, at the right time, and musically, can be overcome by diligent and proper practice. The main problem the author will discuss in this chapter is the one of alternate fingerings and their usage. Many players who are fairly advanced do not make use of the alternate fingerings that are available to them, and therefore some passages in music become more difficult because of awkward fingerings. The author will discuss specific fingering problems together with the areas of articulation, phrasing, breath control, and dynamics that are unique to each composition. A performer must not only play all of the notes correctly, but he must also play them musically.

SONATA FOR ALTO SAXOPHONE AND PIANO

Paul Creston's Sonata for Saxophone and Piano is probably the most difficult number of the four compositions prepared for the recital. Mr. Creston makes use of the full range of the saxophone, so one must play as well in the extreme registers as he does in the middle register. The technical problems are plentiful and are indeed a

challenge, but the biggest challenge is getting used to reading the notation. Playing standard literature, one becomes accustomed to reading key signatures, but Mr. Creston does not use them, and all sharps or flats become accidentals. A note may be sharp going up and flat coming down, and the next time a note will be flat going up and sharp coming down (Example 4). It is difficult to become

Example 4. Measures 5 and 6



accustomed to this notation. Rhythmically, the Sonata is very exacting because of the independence of the saxophone and piano parts. The harmonies sound traditional, but they do not progress in traditional fashion. Often a very fast passage of sixteenth notes, which would usually fit into a scale, will have unusual accidentals and will not be a part of any scale. Thus, a person must adjust his thinking to non-scale thinking.

First Movement

Mr. Creston explained to the author that the tempo of the first movement, "with vigor," should be quick but must not sound rushed. This movement has many awkward

passages which can be made much easier with the proper fingerings.

Within the first ten measures, the composition offers the player the chance to use three of the four alternate fingerings for Bb or A#. The most popular way of fingering Bb is with the side key fingering shown in Diagram 1. Some players play for many years without ever learning about the other three fingerings. To become proficient on the instrument, one must learn when and how to use all of the alternate fingerings. The Bb with the side key should be used mainly in chromatic passages or in the

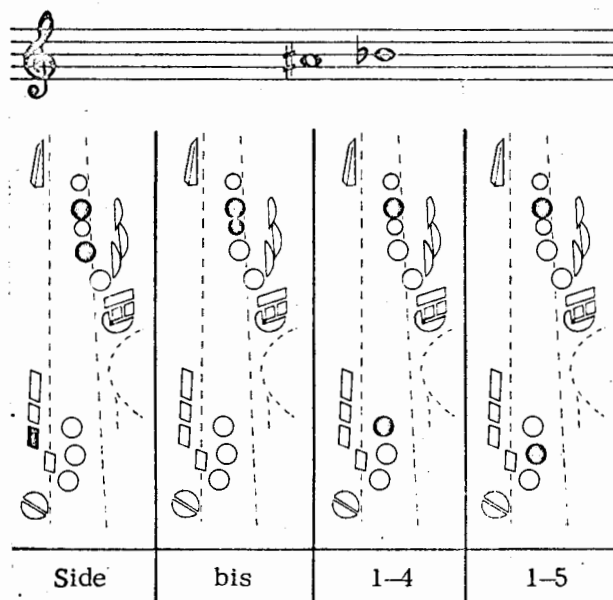


Diagram 1

keys where A is sharped. It is the best way of going quickly from Bb-C-Bb or from A-Bb-A. The Bb fingering with the bis key is used best in flat keys or when B is

not often used. It is this Bb that should be used in Eb arpeggios. The 1-4 fingering of Bb should be used mainly in arpeggios going from D to F to Bb, or any combination of these notes, and when going from B to Bb and back. The 1-5 fingering of A# should be used in the sharp keys and is the best for going from F# to A# or enharmonically Gb to Bb.

Three uses of these fingerings are shown in examples from the Creston Sonata. When alternating quickly between C and Bb the side fingering should be used (Example 5). The bis fingering should be used where the Bb is used repeatedly (Example 6), and the 1-5 fingering should

Example 5. Measure 1 Example 6. Measure 4



be used between F# and A# (Example 7). There will be examples of the 1-4 fingering later in the paper, and other

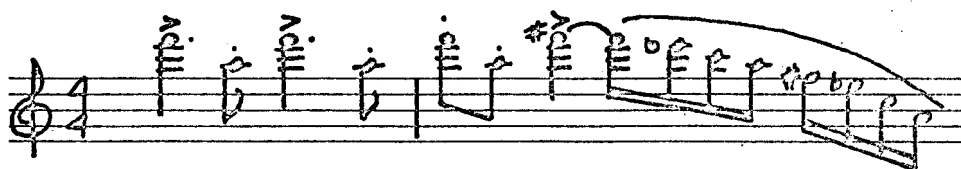
Example 7. Measure 5



examples of these Bb fingerings when the author feels that the right fingering might not be the obvious one.

Creston used only a few notes in the altissimo register, but these are important; it would be wrong to play them down an octave. The high F# in the passage shown in Example 8 can be fingered best with the forked fingered F

Example 8. Measures 7 and 8



and the side Bb key, as shown in Diagram 2. The first finger of the left hand has to roll or slide up to the

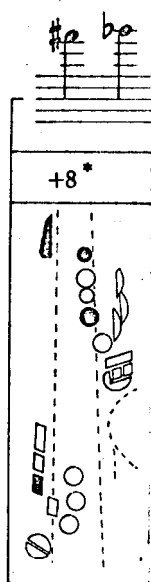


Diagram 2

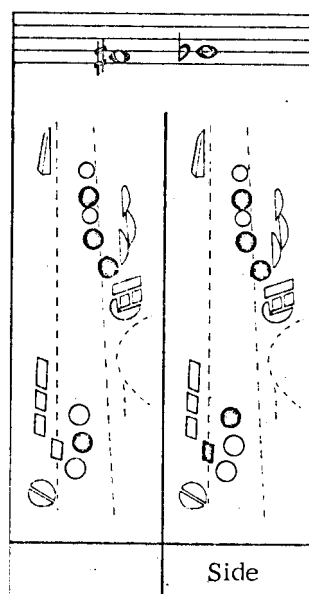


Diagram 3

forked F fingering and then it is fairly easy to roll to the high Eb and continue on in the passage.

The chromatic fingering for Gb or F# is shown in Diagram 3, page 31. This fingering should always be used in straight chromatic runs either up or down the scale, but if there is a skip from below F# where the fifth and sixth fingers are down, or if it is a skip from the F# to a tone where the fifth and the sixth fingers must be put down, it is almost a necessity to use the standard fingering (Example 9). When the standard fingering must be used in going from Gb to F it is known as cross-fingering. The chromatic Gb can also be used in intervals if the right hand fingering works out (Example 10).

Example 9. Measures 9 and 10

Example 10. Measure 16



The high F can be fingered with the three palm keys and the side E key, or it can be fingered with the forked fingering shown in Diagram 4. The first way is used in passages where other palm keys are used and the second fingering is good mainly for arpeggios or skips from notes fingered other than with the palm keys. When skipping to the forked fingering it is best to try and roll the left

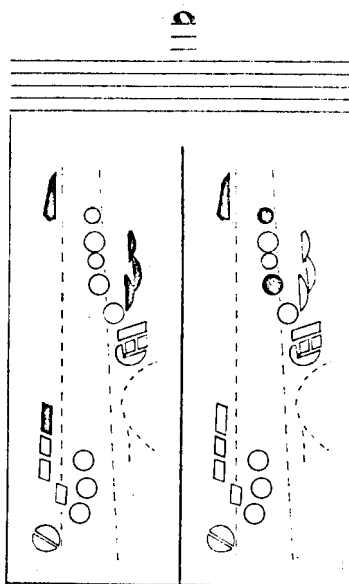


Diagram 4

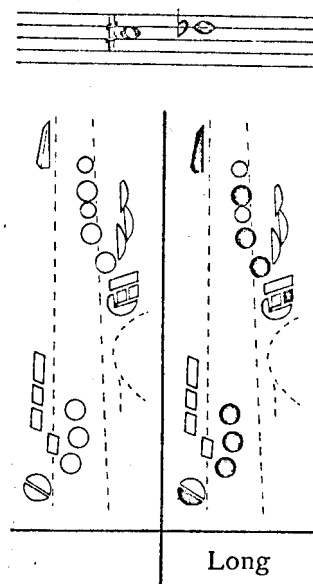


Diagram 5

index finger onto the F key. In Example 11, the forked fingering should be used on the first F and the F in the next measure should be fingered with the palm keys.

Example 11. Measures 12, 13, and 14

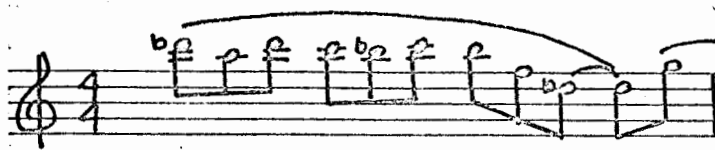


The C# or Db in the middle register causes problems on the saxophone. It can be fingered two ways, as shown in Diagram 5, but many saxophone players do not make use of the long fingering. It should be used when going from a long fingering to C# and then back to a long fingering, as

the quality of tone will be much better than the sound of open C#. When a C# is held for any length of time it is better to play it with the long fingering, but in fast passages coming from the short fingering to the long fingering is often too difficult, and the C# should be fingered open. One must be careful of the intonation of both fingerings, as the long one will be very sharp if the octave key is used, and it is sometimes slightly sharp when no octave key is used. The open C# is played on the shortest part of the horn, and its pitch can be varied with the slightest change of embouchure. The long fingering has a much more resonant sound because it has the whole horn for resonance, and one must work very hard to gain a good resonant sound with the short, or open, fingering.

Measure 18 of the Sonata contains a good example of a passage in which the long fingering should be used (Example 12). There are many opportunities in these compositions to play the open, or standard, C#, but the author

Example 12. Measure 18

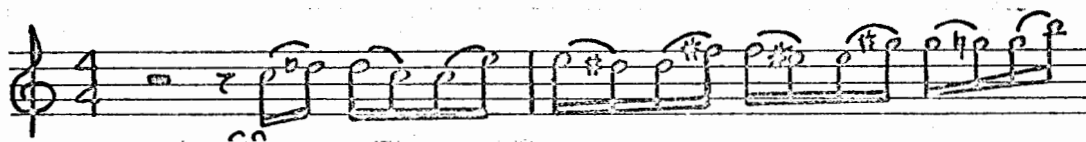


will discuss only a few of them.

The articulation pattern shown in Example 13 appears often in the Sonata, and it must be clearly played. It is

best to make the second note of each slur a little shorter than the first, so the tongue can be prepared for the next

Example 13. Measures 27 and 28



note. Dynamics that appear under these articulated patterns must be observed. In the passage above (Example 13) the F# to E# must be cross-fingered and the Db should be fingered the short way.

Control of the tone and finger execution must be as complete in the high register as in the middle (Example 14). Here the fingering of the high F can be done without

Example 14. Measures 39 and 40



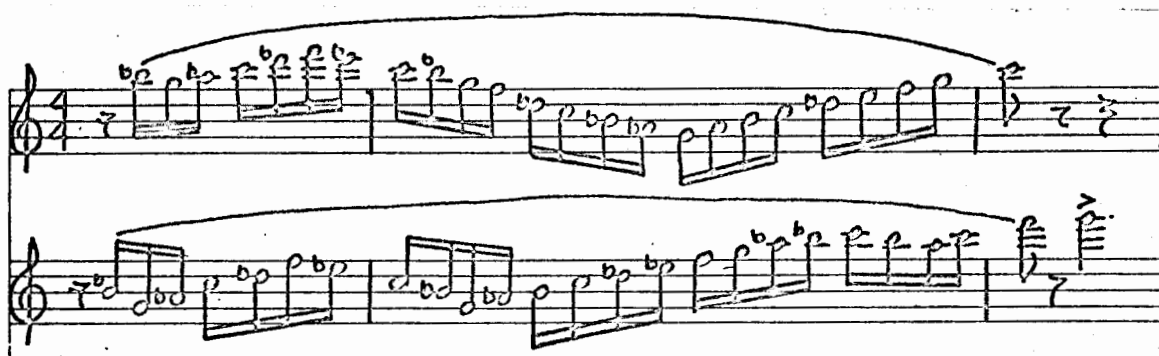
the use of the side E key because the passage is so fast. The high F is slightly flat without the side key, but it is not noticeable at this tempo.

One must not become set in his ways when playing notes that can be played with alternate fingerings, because sometimes two different fingerings should be used in the

1-5 fingering for A#, as the middle finger is able to perform the mordant easily, and it is ready to perform it again on the F# later in the same measure.

The following passage is quoted from measure 99 through measure 103 (Example 18), and it consists of the five most difficult measures in the first movement to get smooth and even. In measures 99 and 100 the Bb's should

Example 18. Measures 99-103



be played with the bis key and the high F can be played without the side key for smoothness. It was difficult, at least for the author, to make the quick change from Ab to G to Ab, and much time was spent practicing to get the little finger to function independently of the fourth finger. In measures 101 and 102 Bb should be played with the bis key, except for the last beat of measure 102, in which it could be played with either the side key or the bis key. In measure 103 the altissimo G should be fingered as shown in Diagram 6, page 38. The high F before the G should be

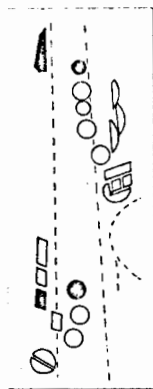


Diagram 6

fingering with the forked fingering, and this makes it easier to finger the G.

In measure 114 (Example 19) the Bb should be played with the bis key, because it goes back to the Db; and while the last beat of measure 119 looks exactly the same as the last beat of measure 114, it should be played with the side key, because the Bb returns to C (Example 20).

Example 19. Measures 114
and 115



Example 20. Measures 119
and 120

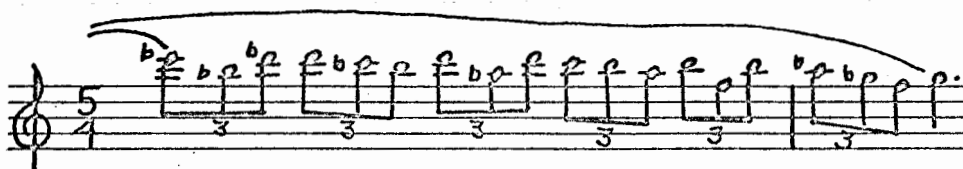


Second Movement

the second movement the saxophone is played in the high register where poor tone and intonation are easily noticed. One must be sure to keep good breath support at all times and to keep the embouchure firm, but not tight, and the throat open. There are few fingering problems in this movement, but to play it in a smooth flowing rhythm and in tune requires very much control. Dynamics should be closely observed. Although it is a very slow movement it must be rhythmically exact in order for the piano and saxophone parts to be compatible.

The chromatic fingerings for F# and A# should be used often in this movement because of the necessity for smoothness. There is only one place where the choice of fingering might cause some difficulty, and that is in measures 20 and 21 (Example 21). The first Bb should be

Example 21. Measures 20 and 21



played with the 1-4 fingering because of the movement between Cb, Bb, and F. The rest of the fingerings in this movement are fairly obvious. There are definite finger problems in the high parts, but these are not caused by

choice of fingering, but by the awkwardness of fingering the high notes.

Third Movement

The third movement, "with gaiety," is difficult because of the tempo and the unusual accents. When the author talked to the composer about this movement, Mr. Creston explained that although the tempo should be quick, it is more important that it be played clearly than fast, and that once the tempo is set at the beginning it should not change. The accents appear both on and off the beat, and it is important that they are executed exactly at the right time, because they are played with the piano. The mordants must be on the beat, not before it, and they must be very quick. The staccato passages, tongued very lightly, and strict use of dynamics make this movement very effective. Because of interplay between the piano and saxophone, and because at times the two parts are completely independent, the rhythm must be exact and cannot be rushed.

There are many fingerings that become awkward at a very fast tempo, especially those that require use of the little finger.

The A# in measure 12 (Example 22) should be played with the 1-5 fingering, and immediately in the next measure one should change to the bis fingering. A quick change in

Example 22. Measures 12 and 13



Bb fingerings should be used again in measures 37, 38, and 39 (Example 23). The first two Bb's should be played with

Example 23. Measures 37, 38, and 39



the bis fingering, the third one should be played with the side fingering, and the last one should again be played with the bis fingering. This passage did not become smooth for the author until he changed the fingering to this method.

One fingering that is not often used is the one from Bb to B using the bis key. In measure 54 (Example 24) the author decided the only way to play the passage smoothly

Example 24. Measures 54-57



was with the bis fingering. Within this passage it is important to put the accents in the right place, and care must be taken not to rush the tempo.

In measure 109, at the rest, there should be a slight pause before the saxophone starts on the new theme. The section from measure 110 to 160 should be played smoothly and expressively.

The next problem spot in this movement was measures 193 through 197, and it was the most difficult in the whole piece (Example 25). This section demands absolute finger control and plenty of air, as it starts in the highest register with many awkward fingerings and then descends into

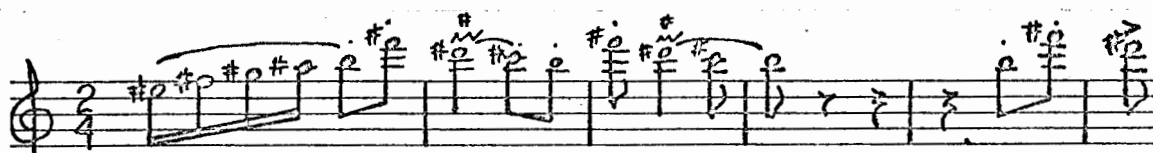
Example 25. Measures 193-197



the low register. The first four notes are the most awkward, as one must make a rocking type motion with the left hand to play these notes evenly. On the first beat, the Eb-F-D-Eb, the side E key can be left off the F fingering so make it smoother. On beat two of the first measure, it is best to play the C to D with the regular fingering and then play Bb with the bis key, as this seems to take the least amount of finger movement. The Bb to C should be

played with the side key C, which will be discussed later in the paper, and this makes an easy movement from C to A and on down the scale. The last Bb to C is played just as the first one. This is an extremely difficult passage to get even and smooth, because of the fast tempo.

Starting in measure 266 (Example 26) there are three altissimo F#'s which must be played very quickly and must speak very clearly. These are fingered exactly as the Example 26. Measures 266-271



one earlier in the first movement, Diagram 2, but the side Bb key can be kept depressed continuously after the first F# is played, and this seems to help the others speak easier. Plenty of air must be kept flowing through the horn, and one must concentrate on not pinching the reed.

The last passage of the Sonata starts on a low Bb, which must be controlled and tongued very lightly as the passage is in sixteenth notes (Example 27). Both of the Example 27. Measure 282-286



Bb's and the A# should be fingered with the side key, as this is the smoothest way to play from G# to A# to B.

CONCERTO FOR Eb ALTO SAXOPHONE

The Concerto for Eb Alto Saxophone, by A. Glazounov, is in a very different style from the Creston Sonata. Glazounov was noted as a traditionalist and wrote within the classic rules of harmony and form. The Concerto was composed in a romantic style and is very melodic. There are many technically difficult spots, since Glazounov, like Creston, made use of the full range of the saxophone, from the altissimo G to the low B, but unlike Creston, his notation is traditional, and this makes it easier to read. This piece requires more rapid use of the tongue, so the exercises mentioned earlier should be of some use. The Concerto has slow passages in the high register where one must have good control of the tone and fast passages in the same register where one must have good control of the fingers. This piece uses the low register more than the Sonata, and one must be able to tongue and slur notes clearly in this register and control the tone to avoid the "squawk" sound often heard in the low register. There are many places where there are octave skips downward, which are quite difficult at times, and there are more trills in this piece than in the others.

Phrasing, dynamics, and tempos are very important

in the Concerto, and they change often and quickly; therefore, one must be alert for these changes. When discussing the special fingering problems in this composition, the author will refer to the diagrams shown in the earlier part of the chapter.

The beginning is very expressive and one should be very observant of the dynamics. It should not be played at an exact tempo, but should be taken with an almost rubato feeling.

The trill fingering for C to D, Diagram 7, can often be used as a grace note, in a turn, or in a very fast C-D or D-C fingering. It is played by holding the regular C key down and opening the D# fingering on the side. When playing this note one must be alert to the intonation, as it is quite sharp.

When the saxophone enters there is a good example of when to use the trill C to D fingering shown in Diagram 7 (Example 28), and in the second measure the triplet figure

Example 28. Measures 11 and 12



must sound as triplets and not as dotted eighth note-sixteenth note rhythms followed by triplets (Example 28).

At number two (Example 29) the alternate fingering

Example 29. Measure 19



for C, Diagram 8, which was mentioned in the Creston but was not discussed there, should be used. This fingering should

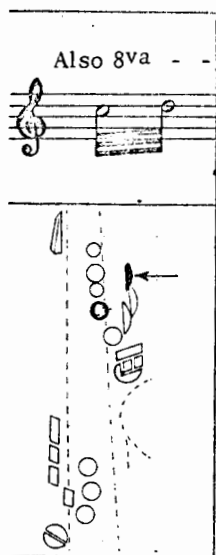


Diagram 7

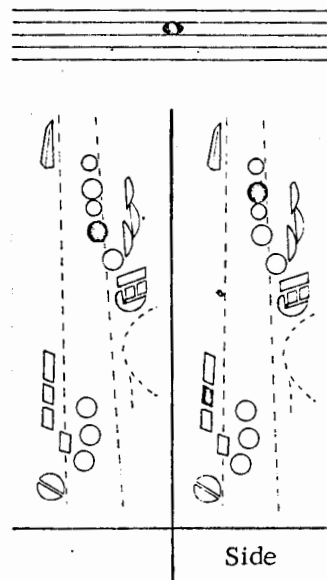


Diagram 8

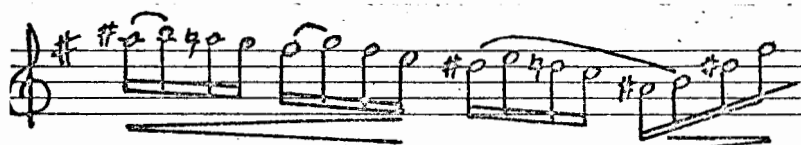
be used when one wants to make a very smooth transition between B and C or a fast B-C-B or C-B-C movement. This side key C fingering can also be used with the bis key fingering of Bb to trill to C or to make a fast movement between Bb and C, as was done in the Creston (Example 25).

Dynamics change quickly and often at number seven

while many notes are going past (Example 30), and one should build the tension and the dynamic level, aiming for the high B at number eight. The tempo through this section should be kept almost metronomic, and if one takes a quick breath before number seven he should be able to play to number eight in one breath. The tonguing through this section must be light and clean.

The first measure at number seven (Example 30) is

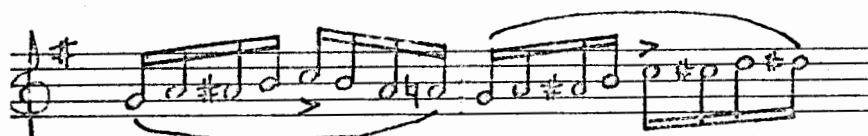
Example 30. Measure 55



not work well here. On beat three the C# to D should be fingered as it would be in the high register, and, although this will not give the D much resonance, it is the best way to finger it at this tempo. On the third beat of the fourth measure the E# to F# must again be cross-fingered, and on the fourth beat the E# to F# should be fingered chromatically.

The passage from eight to nine, based on the chromatic scale, is difficult because it increases in tempo at number eight and again five measures after eight, and the tempo is marked "vivo" at seven measures after eight. At the fourth measure after eight (Example 32) the right hand side keys should be used for the A# and the first C, and

Example 32. Measure 64



while the second A# should still be fingered with the side key, the author prefers to finger the second C with the standard fingering. This is fast use of the side keys, but it is necessary to make the passage smooth. As was mentioned earlier, the author prefers the 1-4 fingering of A# when playing chromatically down the scale. The rest of the passage to number nine is mainly chromatic and shows the

importance that should be placed on learning the chromatic scale well.

The "tranquillo" section should be lyrical, smooth, and very expressive. Because of the key signature, Bb should be played most of the time with the bis fingering, but sometimes, between Bb and C, one should use the side fingering. The long fingering should be used for Db wherever possible, but one must be careful about the intonation.

At number thirteen (Example 33) the need for control of the tone in the two extreme registers is more apparent

Example 33. Measures 103-105



when the music starts on a high E and diminishes in volume to a low C.

The "con moto" section becomes much easier to play if one thinks in chords and makes use of the correct Bb fingerings for the different arpeggios. Extreme care should be taken to build each phrase to a climax on the highest note and then decrescendo. An extremely difficult finger pattern to get smooth is the one that requires a change of the right hand little finger from the Eb key to the C key

(Example 34). This should be done by using the roller

Example 34. Measure 119

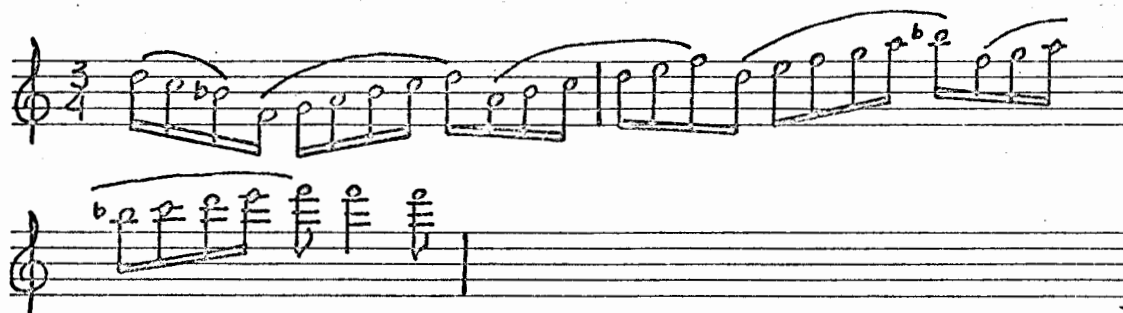


between the two keys, and the little finger should not be lifted off the keys.

The author prefers to finger the high F in the fourth measure after nineteen with the forked fingering, as he feels this is probably the smoothest way to play from F to Eb, although others might prefer to finger the F with the side key.

Although in the "allegro" section after number twenty there is a Bb to F interval skip (Example 35), the Bb should be played with the bis key and not the 1-4

Example 35. Measures 153-155



fingering. Because of the fast tempo here one should make as few finger movements as possible, and the bis key is

the best way of doing this. At the top of the run (Example 35) is an ideal place to finger the high F with the palm keys and the side E key. In this passage it is very important to get the syncopated articulation in the proper place.

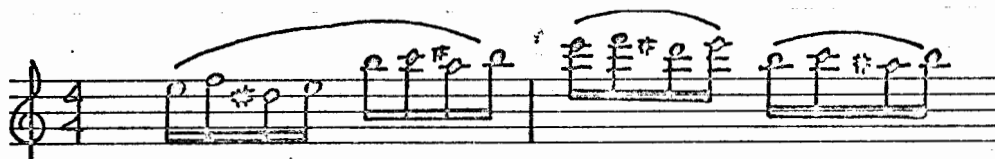
The first part of the cadenza is based on an eight note motive (Example 36). This series of notes is repeated

Example 36.



in different rhythms and at different tempos, and the author has chosen the most difficult spot of the first part of the cadenza to explain the fingering (Example 37). The low and middle E-F-D#-E passage can be fingered only

Example 37. Measures 170 and 171



one way, but the B-C-A#-B passage can best be fingered with the side key C, and the 1-4 A# fingering. Going from B to C this way is very smooth, and it leaves the index finger of the right hand in position to play the A#. The high

E-F-D#-E passage can be fingered only one way, but it must be smooth, and it shows more need for the control of the fingers in the high register. The side E key must be let up only for the D# and then pressed immediately down, which takes practice to become coordinated. The articulated patterns are important through this section, and it is also important to feel the difference in rhythms between eighth notes, triplets, and sixteenth notes.

In the last section of the cadenza it is most important to articulate lightly and cleanly. It sometimes helps to think "da-da" instead of "ta-ta" to prevent the tongue from exploding on the reed. This section is marked "vivo," but the clarity of articulation is more important than the speed; therefore, one must concentrate on coordinating the tongue and fingers.

The desire to have a non-changing embouchure has been discussed earlier in the paper, and in the next section one can see why. Part of the section has been eliminated for the sake of space, but the octave jumps are made in the highest register (Example 38) and in the lowest

Example 38. Measure 195

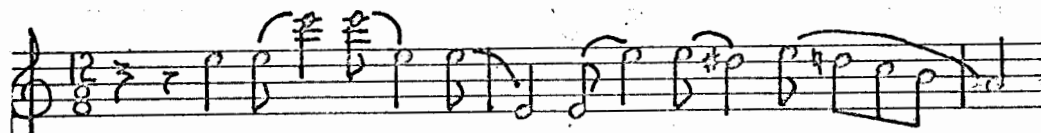


Example 39. Measure 199



register (Example 39). If one had to change his embouchure very much every time he made an octave jump he could never get this section played at a fast tempo. In the first measure at number twenty-four, there are octave jumps both above and below the note E, and they must be slurred; thus it is important that the embouchure and the air stream be kept the same and that the work be done with the octave key (Example 40).

Example 40. Measure 204



Note-wise the section from twenty-four to thirty-two is not difficult, but the articulated patterns are very irregular and it is important that it is played correctly. At number twenty-five the piano enters with a fugal type of entrance, and the saxophone becomes the least important of the voices.

Getting trills smoothly is the most important part of the section from number thirty-six to thirty-seven. None of the trills are unusual fingerings, but it is important that they become as smooth as possible. The hardest trill is from A to B, and there is no easy way of doing it; one must simply practice it slowly until it is even, and

C to B must be cross-fingered because the melody goes immediately back to a C trill which must be fingered with the C key down.

The passage from number forty-four to forty-five is based strictly on major arpeggios. If one has practiced these arpeggios with their scales this section should cause problems only because of tempo. Each phrase in this section must crescendo, and an accent must be placed on the last quarter note (Example 43). At number forty-five the passage

Example 43. Measures 304 and 305



is sometimes chromatic and contains some rather awkward intervals, but the fingerings are standard ones.

The second, third, and fourth measures after number forty-nine (Example 44) require embouchure and tone control

Example 44. Measures 323-325

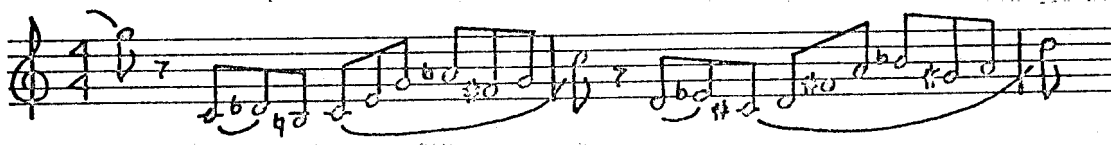


to go from the high F to a low B smoothly and without a

breath. The F should be fingered with the palm keys to make a smooth transition downward, and very good breath control and plenty of air are required to make the low B speak softly.

At number fifty-one there are low note passages that have awkward fingerings and must be lightly articulated and softly played (Example 45). The Db to B must be done with the roller key with the left little finger, and

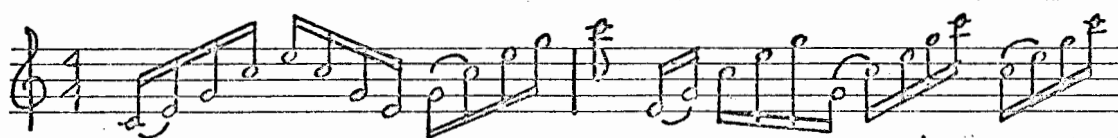
Example 45. Measures 330 and 331



the finger should not be lifted from the keys. The embouchure must be set and one must have good breath support so the tone may be started softly. To finger the Eb to C# in the second measure, the right little finger must roll to the C key at the exact time the left finger depresses the C# key; this requires good finger coordination. This time the right little finger should not leave the key.

The only harmonic used in the Concerto is a high G, and it can be played at the option of the saxophonist (Example 46). The author fingers this G the same as the one mentioned in the Creston Sonata (Diagram 6), but the fingering of this E just before the high G is changed to

Example 47. Measures 350 and 351



place the arpeggio ends on a high C and starts again on a low E, and this requires careful embouchure control.

Chapter 5

SUMMARY

In writing this paper, the author has tried to accomplish four objectives. He has tried to show the benefits to be gained from preparing and performing a graduate recital. Chapter 2 contains a brief history of the saxophone pertaining mainly to its use in serious music, and only mentioning its use in "pop" music and jazz. The chapter on improving saxophone technique should be helpful to someone who is interested in playing or teaching the saxophone. By reading the analysis of the problems in the preparation of this recital, it is hoped that other saxophonists might benefit from the ideas presented here in the preparation of the same compositions or in solving similar problems in other compositions. how

The writer feels that preparing the recital was a worthwhile project and that he has gained in many ways from the time and effort spent. Of the most benefit to the writer in the preparation of the recital was the learning of the value of self-discipline. Self-discipline is an invaluable asset to anyone regardless of his occupation, but it is of special value to a good teacher. The technique gained on the saxophone through this year of study has

allowed the author to study music in greater depth than ever before. The chance to express oneself on an instrument as a soloist, rather than as a member of a group, helps one to improve such musical aspects as interpretation, phrasing, dynamics, and intonation. The improvement made in these important fundamentals of music should help the author to become a better teacher.

The author hopes the chapter on improving technique will be of value to someone who is interested in becoming a capable saxophonist. The methods discussed in this chapter are ones that the author used in improving his own technique and the technique of his students. The altissimo register is becoming a more important part of saxophone study, and it is an area about which the author would like to study further.

The analysis of the problems in the compositions re-emphasized to the author the importance of analysis of difficult problems in a composition before beginning work on it. This type of analysis helps save valuable time and effort when preparing a piece for recital.

Adolphe Sax invented the saxophone as an instrument for both the band and the orchestra, and if he were alive today he would probably be unpleasantly surprised at many of the sounds that have been produced on the saxophone in the eighty years since his death. In this paper the author did not wish to give the impression that he found the use

of the saxophone in all "pop" music and jazz distasteful, but he felt that this use of the saxophone is already well known.

Although the saxophone is an important instrument in every band, the author would like to see it used more in the orchestra. It is too late to change the music that has already been written, but there is hope that present and future composers will use the saxophone more than did those of the past. Many of the prejudices against the saxophone are being overcome. If the saxophone becomes a primary instrument for study at more colleges and universities, and if saxophonists keep improving the quality of saxophone playing, surely composers will use the instrument more often as a solo instrument as well as a member of the orchestra.

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APPENDIXES

APPENDIX A

SLOWLY

The image displays a handwritten musical score on five staves, each beginning with a treble clef. The tempo marking "SLOWLY" is written above the first staff. The notation is written in ink and includes various musical symbols such as notes, rests, and accidentals. The first staff features a long slur spanning across the first measure and a second measure. The second staff has a slur over the first measure and a slur over the second measure. The third staff has a slur over the first measure and a slur over the second measure. The fourth staff has a slur over the first measure and a slur over the second measure. The fifth staff has a slur over the first measure and a slur over the second measure. The notation is somewhat informal, with some notes and accidentals appearing to be written in a shorthand or simplified manner. The staves are connected by a vertical line on the left side.

APPENDIX B

ADVANCED STUDY BOOKS

<u>Author</u>	<u>Title</u>	<u>Publisher</u>
1. Berbiguier	<u>18 Exercises or Etudes</u>	Leduc
2. Bozza	<u>12 Etude Caprices</u>	Leduc
3. Cavallini- Iasilli	<u>30 Caprices</u>	Fischer
4. Douse	<u>How to Double and Triple Staccato</u>	Baron
5. Ferling	<u>48 Studies for Oboe or Sax</u>	Southern
6. Gabucci- Allard	<u>60 Varied Etudes</u>	Ricordi
7. Gatti- Iasilli	<u>27 Virtuoso Studies</u>	Fischer
8. McCathren	<u>Daily Routine for Saxophone</u>	Leblanc
9. Mule	<u>Scales and Arpeggios (3 Vol.)</u>	Leduc
10. Nash	<u>Studies in High Harmonics</u>	Leeds
11. Rascher	<u>Top Tones for Saxophone</u>	Fischer
12. Rascher	<u>158 Exercises</u>	Hanson
13. Soussman- Mule	<u>Thirty Grand Exercises or Studies after Soussman (3 Vol.)</u>	Leduc
14. Teal	<u>The Saxophonist's Workbook</u>	University Music Press
15. Terschak- Mule	<u>Daily Exercises</u>	Leduc
16. Traxler- Lazarus	<u>Virtuoso Studies</u>	Belwin
17. Voxman	<u>Selected Studies</u>	Rubank